# NORTH CAROLINA
# DIVISION OF AIR QUALITY
## Application Review

**Issue Date:** xx

**Region:** Mooresville Regional Office
**County:** Catawba
**NC Facility ID:** 1800206
**Inspector's Name:** Denise Hayes
**Date of Last Inspection:** 08/21/2020
**Compliance Code:** 3 / Compliance - inspection

### Facility Data

**Applicant (Facility's Name):** Shurtape Technologies - Hickory/Highland Plant

**Facility Address:**
Shurtape Technologies - Hickory/Highland Plant
1620 Highland Avenue
Hickory, NC 28603

**SIC:** 2672 / Paper Coated And Laminated, Nec
**NAICS:** 322222 / Coated and Laminated Paper Manufacturing

**Facility Classification: Before:** Title V **After:** Title V
**Fee Classification: Before:** Title V **After:** Title V

### Permit Applicability (this application only)

**SIP:** N/A
**NSPS:** N/A
**NESHAP:** N/A
**PSD:** PAL Renewal
**PSD Avoidance:** N/A
**NC Toxics:** N/A
**112(r):** N/A
**Other:** N/A

### Contact Data

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### Application Data

**Application Number:** 1800206.20A
**Date Received:** 09/25/2020
**Application Type:** Modification
**Application Schedule:** TV-Significant

**Existing Permit Data**
**Existing Permit Number:** 02218/T36
**Existing Permit Issue Date:** 01/11/2019
**Existing Permit Expiration Date:** 12/31/2023

**Total Actual emissions in TONS/YEAR:**

| CY | SO2 | NOX | VOC | CO | PM10 | Total HAP | Largest HAP |
|---|---|---|---|---|---|---|---|
| 2019 | 0.0600 | 10.66 | 338.55 | 8.95 | 3.59 | 219.73 | 215.70 [Toluene] |
| 2018 | 0.0700 | 11.26 | 334.99 | 9.46 | 3.97 | 227.36 | 222.53 [Toluene] |
| 2017 | 0.0700 | 10.93 | 283.12 | 9.19 | 3.45 | 192.85 | 188.52 [Toluene] |
| 2016 | 0.0600 | 10.72 | 258.77 | 9.00 | 3.37 | 180.24 | 176.21 [Toluene] |
| 2015 | 0.0600 | 10.83 | 281.77 | 9.11 | 4.51 | 206.53 | 202.51 [Toluene] |

**Review Engineer:** Rahul Thaker

**Review Engineer's Signature:** **Date:** May 21, 2021

**Comments / Recommendations:**
**Issue** 02218/T37
**Permit Issue Date:** xx
**Permit Expiration Date:** xx

## 1. Purpose of Application

Shurtape Technologies – Hickory/Highland Plant ("Shurtape"), Hickory, Catawba County, North Carolina, submitted a permit application on September 25, 2020 to renew the current PAL (Actuals Plantwide Applicability Limitation) for VOC (Volatile Organic Compounds) of 865 tons per year (TPY). The application was deemed a "significant modification" to its current Title V permit; thus, it will be processed in accordance with 15A NCAC 02Q .0516. The DAQ deemed the application "complete" for processing as of September 28, 2020.

## 2. Facility Description

The facility makes both solvent and water-based pressure sensitive tapes. Adhesive resin is applied to a substrate, primarily paper, on coating lines using continuous rolls (web) of material. The coated web is dried via ovens. Additional coatings can be applied to the dried web if necessary. In the last step of production, the dried web is sent to finishing, where the material is sliced and rolled to customer specifications.

## 3. Application Chronology

| | |
|---|---|
| 9/25/2020 | DAQ received the application. |
| 9/28/2020 | DAQ deemed the application complete. |
| 1/4/2021 | DAQ sent the additional information request for the basis for renewing the PAL at the current PAL level. |
| 1/28/2021 | DAQ received the requested information. |
| 2/10/2021 | DAQ requested information on emissions estimate for "over-control". |
| 2/12/2021 | DAQ received the requested information. |
| 3/31/2021 | DAQ requested information on responsible official (RO), permit language for NSPS JJJJ and EEEE amendments, monitoring requirements for several PAL emissions units, and lack of revalidation for emissions factors for some emissions units. |
| 4/21/2021 | DAQ received the requested information. |
| 4/29/2021 | Sent the pre-public notice draft permit to applicant, MRO, Technical Services Section, and the Supervisor. |
| 5/3/2021 | Received comments from the MRO. |
| 5/14/2021 | Received comments from the applicant. |

## 4. Statement of Compliance

Based on the compliance inspection of February 8, 2021, conducted by the Mooresville Regional Office, "this facility appeared to be in compliance with the applicable air quality regulations." In addition, RO of the facility certified that the "facility is in compliance with all applicable requirements" through the submitted Form E5 "Title V Compliance Certification".

## 5. Permit Modification/Changes

### 5.1 Renewal of Current PAL

The Permittee obtained an initial PAL of 865 tons/yr for VOCs for its Hickory/Highland facility on June 21, 2011 (02218T30), which is effective from July 1, 2011 to June 30, 2021. As stated above, the Permittee requested to renew this PAL on September 25, 2020. The DAQ will process the application in accordance with its SIP (State Implementation Plan)-approved PSD regulation in 15A NCAC 02D .0530 which incorporates the requirements in §51.166(w)(10) "Renewal of PAL" with one exception in 02D .0530(i). Each of the elements for PAL renewal are discussed below:

§51.166(w)(10)(i)

*The reviewing authority shall follow the procedures specified in paragraph (w)(5) of this section in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written*

*rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the reviewing authority.*

Before finalizing the renewed VOCs PAL for the facility, the DAQ will propose it for seeking public comments pursuant to §51.166(w)(5) "public participation". Since the application is processed in accordance with the Title V procedures in 02Q .0500, the DAQ will ensure that the requirement in 02Q .0521 "public participation" is met as well.

§51.166(w)(10)(ii) Application Deadline

*The plan shall require that a major stationary source owner or operator shall submit a timely application to the reviewing authority to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.*

The Permittee submitted a timely and complete renewal application on September 25, 2020, which is at least 6 months prior to the expiration date of June 30, 2021 for the current PAL. Thus, the VOCs PAL of 865 tons/yr continues to be effective even after the above expiration date, until the Title V permit with the renewed PAL is issued or denied.

§51.166(w)(10)(iii) Application Requirements

*The application to renew a PAL permit shall contain the information required in paragraphs (w)(10)(iii)(a) through (d) of this section.*

*(a) The information required in paragraphs (w)(3)(i) through (iii) of this section.*

*§51.166(w)(3)(i)*
*A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.*

The Table 5-1 below provides a complete list of emissions units at the facility along with their classifications (small, synthetic minor or major) based on the potential to emit.

In addition to the facility-wide requirement of VOCs PAL in 02D .0530, the following additional "applicable requirements" shall apply to various emissions units.

15A NCAC 02D 0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"
15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"
15A NCAC 02D .0521 "Control of Visible Emissions"
15A NCAC 02D .0524 "New Source Performance Standards" [40 CFR 60 Subparts Dc and RR]
15A NCAC 02D .1111 "Maximum Achievable Control Technology" (40 CFR 63 Subparts EEEE, JJJJ, and DDDDD)
15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions"

All of the above requirements are enforced upon by EPA, citizens of US, as defined in Clean Air Act (CAA), and NCDAQ, except the odorous emissions control requirement (02D .1806) which is enforceable by the DAQ only. All of these requirements are adequately included in the current permit except the corrections/changes discussed in this application review.

The emissions units (ID Nos. ES-33-5-01, ES-33-5-FP, ES-33-8-02, ES-33-8-04, ES-33-09-02, ES-33-0-01, ES-33-PC-2, ES-PD1-CAL1, ES-33-COAT10, and ES-36-CL-1) at the facility are subject to the VOCs emissions standards in 40 CFR 60 Subpart RR "Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations" as below:

- Limit the "as applied in coatings" to these coaters to less than 45 Mg (50 tons) per 12 month period, or if the amount of VOCs input exceeds 45 Mg (50 tons) per 12 month period,

  - Limit the emissions to no more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or

  - Demonstrate a 90 percent overall VOC emission reduction as calculated over a calendar month; or

  - Demonstrate the percent overall VOC emission reduction specified in 40 CFR 60.443(b) as calculated over a calendar month.

All other emissions units are not subject to any applicable requirement for VOCs emissions except the renewed PAL.

Finally, the emissions units (ID Nos. ES-33-5-01, ES-33-5-FP, ES-33-6-02, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-09-02, ES-33-COAT10, ES-36-CL-1, and ES-33-0-01) are subject to the following emissions standard for HAPs according to NESHAP Subpart JJJJ, which are relevant in renewing the VOCs PAL:

- Limit the organic HAP emissions to no more than 20 percent of the mass of coating solids applied for each month.

The Permittee has an option to meet the above limit with the volatile organic content and coating solids content of each coating material "as applied".

*§51.166(w)(3)(ii)*
*Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown, and malfunction.*

The Tables 5-1 and 5-2 below, provide the information on baseline actual emissions (BAE) and their basis. The BAE for each emission unit is determined based upon the actual emissions for 24 consecutive months from January 2018 through December 2019. Due to the nature of operations at the facility, the BAE for each unit includes the fugitive emissions and emissions due to start-up, shut-down and malfunction. The facility has grouped emissions for certain emissions units. There are no units permanently shut-down after this selected baseline period which would otherwise require removal of the associated BAE for the unit from the PAL level. There is only one "new unit" which is coater 10 (ES-33-COAT10). This coater was constructed after the selected baseline period; hence as per the PAL provision, potential to emit (PTE) shall be added to the PAL level instead of the BAE.

As shown in Table 5-1, the BAE are 343 tons per year (TPY).

The DAQ has verified the BAE for the facility and found them to be accurate.

*§51.166(w)(3)(iii)*
*The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (w)(13)(i) of this section.*

The applicant has proposed the same monitoring approach as included in the current PAL for VOCs for this renewal request, which is a combination of mass balance, application of control device (solvent recovery units, regenerative thermal oxidizers), and the use of emissions factors for estimating emissions for various emissions units.

*(b) A proposed PAL level.*

The applicant has proposed to renew the VOCs PAL for its Hickory facility at a level of the current PAL of 865 TPY.

*(c) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).*

As provided by the applicant and shown in the Table 5-1 below, facility's current potential to emit (PTE) is 1,201 TPY which is a sum of the PTE for each of the emission units. The applicant has provided the PTE emissions calculations for each emissions unit and the DAQ has found them correctly determined. The applicant has emphasized that the collective PTE for just two solvent-based production lines (Coating Line 5 and Coating Line 8) is 1,070 TPY, assuming these coating lines running on their highest emitting product continuously, and emissions control at 90% capture and control (as allowed per 40 CFR 60 Subpart RR).

*(d) Any other information the owner or operator wishes the reviewing authority to consider in determining the appropriate level for renewing the PAL.*

None.

§51.166(w)(10)(iv) PAL Adjustment
*In determining whether and how to adjust the PAL, the reviewing authority shall consider the options outlined in paragraphs (w)(10)(iv)(a) and (b) of this section. However, in no case may any such adjustment fail to comply with paragraph (w)(10)(iv)(c) of this section.*

*(a) If the emissions level calculated in accordance with paragraph (w)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (w)(10)(iv)(b) of this section; or*

*(b) The reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale.*

(*c) Notwithstanding paragraphs (w)(10)(iv)(a) and (b) of this section:*

*(1) If the potential to emit of the major stationary source is less than the PAL, the reviewing authority shall adjust the PAL to a level no greater than the potential to emit of the source; and*

*(2) The reviewing authority shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of paragraph (w)(11) of this section (increasing a PAL).*

It should be noted that NC's SIP-approved PSD provision in 02D .0530(i) provides for the following:

*(i) For the purposes of this Rule, 40 CFR 51.166(w)(10)(iv)(a) shall read: "If the emissions level calculated in accordance with Paragraph (w)(6) of this Section is equal to or greater than 80 percent of the PAL level, the Director shall renew the PAL at the same level." 40 CFR 51.166(w)(10)(iv)(b) is not incorporated by reference.*

Because the provision §51.166(w)(10)(iv)(b) is not incorporated into NC's PSD regulation and the provision in §51.166(w)(10)(iv)(a) is replaced with 02D .0530(i), the facility request shall conform to the requirements both in 02D .0530(i) and §51.166(w)(10)(iv)(c) for renewing the current PAL for VOCs.

Regarding the emission level at the time of renewal, it is determined by adding the BAE to the significant rate for VOCs. That is, 343 TPY + 40 TPY = 383 TPY, which does not equal to or exceed the 80% of the current PAL level (692 TPY) in 02D .0530(i). Therefore, the DAQ cannot approve / renew the PAL at the current level of 865 TPY without the reasoned justification(s) or rationale basis from the applicant for a higher PAL (i.e., higher than 383 TPY). Based upon DAQ requests, the applicant has provided reasoned justifications for a higher PAL corresponding to the current PAL of 865 TPY as below:

First, the applicant argued on the basis of operational flexibility for a higher PAL. Over the last 30 years, Shurtape has developed capabilities to produce tape via multiple formulation types which include both solvent and non-solvent (i.e., low VOCs) technologies. Shurtape developed its Highland Plant (part of Hickory facility) to utilize low VOC technology. Using the low-VOC technologies, Shurtape has developed products equivalent to their solvent-based formulation counterparts.

During the selected baseline period of 2018-2019, approximately 35% of Shurtape production utilized solvent-based formulations with the remaining 65% utilizing low-VOC formulations. As stated above, the Permittee has the capability to produce tapes by either of these methods. The method which is ultimately selected depends upon the following factors:

Equipment Availability

Shurtape has a finite level of production capability for each coating formulation technology. If an equipment availability issue arises, production will shift to leverage a formulation technology where production capacity exists. If production capacity shifts from low-VOC technology to solvent technology, the utilization of solvent based coating lines 5 and 8 would increase. Long term availability issues would likely see capacity maximized for 8,760 hours per year. Thus, the Permittee contends that the facility's PTE (based on 8,760 hours of operation) is a realistic emission rate that could happen.

Workforce Availability

During the COVID-19 situation, the facility has experienced the quarantining of the entire crews, thus, precluding their availability to operate production equipment. This workforce availability has impacted entire lines, causing shutdowns with production activities moved to other lines. This has occurred multiple times during the pandemic.

Raw Material Availability

Manufacturing using low-VOCs formulations relies on specialized raw materials. Many factors impact availability of those raw materials, including transportation availability and geopolitical (international) events. If any time, the raw materials needed to produce low-VOCs formulations were not available, Shurtape would produce those tapes using solvent-based formulations that meet the demand.

Market Demand

Market demand for a particular product(s) can result into production variability from year to year. It can result in production declines with declines in emissions or production increases with similar increased emissions. For example, as provided in the application, in 2018 for "Tape 20" on Line 5, less than 34,000 $yd^2$ of this kind of tape were produced, yet, in 2019, more than 1,500,000 $yd^2$ of the same tape were produced, indicating a 4400% increase in customer demand for this product. Another example is for "Tape R" on Line 8 that no production occurred in 2018, though 2019 saw an almost 11,500,000 $yd^2$ of tape produced to meet the customer demand for the product. The last example especially related to the COVOD pandemic is that the facility experienced demand for painters' tapes and tapes for marking line/pathways for retail establishments due to this unanticipated event.

Second, the Permittee argued on the basis of "over-controlled" emissions that the DAQ should approve a higher PAL. Specifically as mentioned previously, the coating lines 5 and 8 are subject to the following emissions standards for VOCs under NSPS Subpart RR:

0.20 kg VOC/kg of coating solids applied over a calendar month or
a 90% overall VOC emission reduction as calculated over a calendar month, or
the percent overall VOC emission reduction specified in this Subpart over a calendar month.

The required control efficiency is never more than 90%. It is actually a calculated number that changes every month. The Permittee argues that while the control efficiency never has to be above 90%, it frequently only requires to be in the mid 80% range. The Permittee further argues that the facility routinely controls VOCs emissions at a level higher than 90% from these coating lines (i.e., over-controlling beyond the NSPS requirements). Based on this point, the applicant contends that any lowering of VOCs PAL below the current PAL would essentially penalize the facility for its voluntary efforts in further reducing emissions (beyond the NSPS requirement), which is antithetical to the purpose of the PAL program; thus, it has requested a higher PAL at the current PAL level of 865 TPY.

The DAQ has estimated the "over-controlled" VOCs emissions from the above referenced coating lines as follows:

Based on the submitted information, the VOCs emissions contributions for coating lines 5 and 8 in the BAE are 234.35 TPY (average of 240 TPY (2018) and 228.7 TPY (2019)).

However, according to the above NSPS emission standard of 0.20 kg VOC/kg of coating solids applied, the allowable total emissions for coating lines 5 and 8 for the consecutive 24-months average would be 708.6 TPY (average of 712.5 TPY (2018) and 704.6 TPY (2019)), considering the actual amounts of solids applied in both coating line 5 (1,871,818 lbs (2018), 1,815,808 lbs (2019)) and coating line 8 (5.252,866 lbs (2018) and 5,230,577 lbs (2019)).

Thus, the "over-controlled" emissions just from these two lines are approximately 474 TPY (i.e., 708.6 TPY – 234.35 TPY) for the selected baseline period (2018-2019).

The DAQ believes that these "over-controlled" emissions are voluntary emissions reductions on the part of the Permittee and cannot be taken away by the state agency through adjusting the current PAL downward. It needs to be emphasized that the PAL program is specifically designed to encourage voluntary emissions reductions by providing flexibility and ability in managing emissions for future expansions without triggering NSR. The DAQ believes that the facility should be able to retain the accompanying operational flexibility associated with the "over-controlled" 474 TPY emissions as noted above. Thus, the DAQ believes that the following level is more representative of facility's baseline emissions and it will use to determine the appropriate level for PAL renewal:

343 TPY (BAE) + 40 TPY (significant rate) + 474 TPY (voluntary reductions) = 857 TPY.

The above emission level (857 TPY) is approximately equal to the current PAL of 865 TPY. It should be noted that this level of emissions (857 TPY) exceeds the emission corresponding to the 80% of current PAL (i.e., 692 TPY), complying with the requirement in 02D .0530(i). Moreover, although the facility's PTE (1,201 TPY) is higher than the current PAL (865 TPY), the facility has not requested to increase the PAL; thus, it meets the requirement in §51.166(w)(10)(iv)(c) as well.

Finally, it needs to be mentioned that the facility is planning to manufacture high-grade industrial masking tapes at its Hickory facility utilizing formulations similar to those include in the application. The Permittee has stated that these products have the potential to increase utilization of the coating lines 5 and 8 above the 2018-2019 baseline period; thus, there is a real possibility of increase in emissions above the BAE. This very situation has been discussed by the EPA in its NSR Reform Rule[1] as follows:

> "Similarly, your source might be designed to manufacture several different products, and your permit might allow you to switch from one product to another. During the initial term of the PAL, you might produce a product associated with low emissions, resulting in source-wide emissions that were consistently less than 80 percent of the PAL level. However, you might be planning to produce a product that would cause the source to emit at a higher level following PAL renewal. This is another example of a circumstance in which the reviewing authority could reasonably determine that a higher level was more representative of your source's baseline actual emissions."

After considering the totality of circumstance and the reasoned basis above, the DAQ exercises its discretion in §51.166(w)(10)(iv) in determining that the adjustment to the current PAL is not warranted and approves to renew the VOCs PAL at the current level of 865 TPY. The DAQ concludes that the renewed PAL of 865 TPY is reasonably representative of facility's baseline actual emissions.

[1] *"Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Baseline Emissions Determination, Actual-to-Future-Actual-Methodology, Plantwide Applicability Limitations, Clean Units, Pollution Control Projects"*, at Page 80216, 67 FR 80186, December 31, 2002.

# Table 5-1 Emissions Units, BAE, and Potential to Emit

| Source ID | Source Description | | 2018 CY | | 2019 CY | | Potential Emissions |
|---|---|---|---|---|---|---|---|
| | | | (lb/yr) | (tpy) | (lb/yr) | (tpy) | (tpy) |
| ES-33-5-01 | Hickory Plant Solvent-Based Coating Line 5 (toluene) | Solvent Recovery System Toluene Emissions | 433,846 | 216.9 | 404,784 | 202.4 | 343 |
| ES-33-8-02 / ES-33-8-04 | Hickory Plant Solvent-Based Coating Line 8 | Solvent Recovery System Non-Toluene VOC Emissions | 46,289 | 23.1 | 52,639 | 26.3 | 724 |
| ES-33-1-01, ES-33-52 | Hickory Plant Raw Material Storage Tanks and Mixers | | | | | | |
| ES-33-RS | Bulk Resin System including Mixing Tank | | | | | | |
| ES-33-SPC-MT1 | Mixing Tanks | | | | | | |
| CD-33-6-10 & CD-33-8-10 | Carbon Adsorption Systems (actually, "Solvent-Recovery Systems) | | | | | | |
| ES-33-2-45ST & ES-33-2-43 | Hickory Plant Raw Material Storage Tanks | | | | | | |
| ES-33-TST-TR1 | Toluene Transfer Racks | | | | | | |
| ES-33-SBPRT-TR1 | Solvent-based Resin Transfer Racks | | | | | | |
| ES-33-SBPRT-TR3 and TR4 | Fill Ports | | | | | | |
| ES-33-2-49 | Mixing Area Parts Washers | | | | | | |
| ES-33-6-02, ES-33-07-02, ES-33-09-02 | Hickory Plant Water-based Coating Lines | Other Coating Lines & Associated Tanks | 166,988 | 83.5 | 182,938 | 91.5 | 90.4 |
| ES-33-5-01 | Hickory Plant Coating Lines 5 (Specialty Chemicals) | | | | | | |
| ES-33-1-01, ES-33-2-45ST, ES-33-52 | Hickory Plant Raw Material Storage Tanks and Mixers (Specialty Chemicals) | | | | | | |
| IES-33-IT-WB and IES-27-WB1 | Hickory Plant Water-based Storage Tanks | | | | | | |
| ES-33-PRT-TR1, ES-ST-25, IES-POTank, IES-33RG016(55) | Hickory Plant Other Storage Tanks | | | | | | |
| ES-33ST-1 | Liquid Material Storage Tank | | | | | | |
| ES-36-CL-1 and CD-36-RTO | Highland Plant Coating Lines | | | | | | |
| IES-36-IT-1, IES-36-WBST1 | Highland Plant Storage Tanks | | | | | | |
| IES-36-POST-1 and IES-36-MRT-1 | Highland Plant Other Storage Tanks | | | | | | |
| ES-33-5-FP | Flexographic Printers | | | | | | |
| ES-36-BM1 and BM2 | Bulk Melters | | | | | | |
| IS-FAE | Fragrance Application Equipment | | | | | | |
| ES-33-0-01 and ES-33-PC-2 | Hickory Plant Pilot Coaters | Pilot Coater and Calender | 1,492 | 0.7 | 427 | 0.2 | 0.84 |
| ES-PD1-CAL1 | Pilot-scale R&D Calender | | | | | | |
| ES-33-COAT10 | Hickory Plant Adhesive Coater | Coater #10 | 0.00 | 0.00 | 8.10 | 0.00 | 9.64 |
| ES-33-15-02 | Rubber Grinding and Conveying Operations | Rubber Grinding and Pilot Extruder | 2,058 | 1.0 | 1,937 | 1.0 | 1.48 |
| IS-PDI-EX1 | Pilot scale extruder | | | | | | |
| IES-R&D-Gen, ES-GEN1, ES-GEN2 | Emergency Generators | Generator Emissions | 0.71 | 0.00 | 2.93 | 0.00 | 0.03 |
| ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-33-BLR-TEMP, ES-36-BLR-B1, ES-33-5-01, ES-33-6-02, ES-33-07-02, ES-33-09-02, ES-36-CL-1, ES-33-56-RTO, CD-36-RTO-1 | Boilers, Drying Ovens, and RTOs | Facility-wide NG Usage Emissions | 1,236 | 0.62 | 1,168 | 0.58 | 0.90 |
| | | Facility-wide Propane Usage Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| ES-36-PET | Petroleum Hydrocarbon Storage Tank | Petroleum Hydrocarbon Storage Tank | 12.00 | 0.01 | 12.00 | 0.01 | 0.30 |
| ES-R&DPRN1 and 2 | R&D printers | R&D Printers | 6,000 | 3.00 | 6,000 | 3.00 | 6.00 |
| ES-GPC | General Cleaning -non toluene | General Cleaning | 12,000 | 6.00 | 12,000 | 6.00 | 12.00 |
| ES-33-MSPW1, ES-27-MSPW1, ES-36-MSPW1 and ES-F-PW1 | Maintenance Area Parts Washers | Parts Washers | 6,000 | 3.00 | 6,000 | 3.00 | 3.00 |
| ES-33ST-1 | Liquid Material Storage Tanks | Liquid Material Storage Tanks | 6,000 | 3.00 | 6,000 | 3.00 | 3.00 |
| IES-33-GR | Groundwater Remediation System | Groundwater Remediation | 2,112 | 1.06 | 2,112 | 1.06 | 1.06 |
| ES-33-DRUMUNLOAD | Coater 10 Drum Unloading | Coater 10 Drum Unloading | 0.00 | 0.00 | 32 | 0.02 | 0.02 |
| IES-33-ADMIX | Coater 10 Adhesive Mixing | Coater 10 Adhesive Mixing | 0.00 | 0.00 | 32 | 0.02 | 0.02 |
| ES-33-RDSB | R&D Spray Booth | R&D Spray Booth | 6,000 | 3.00 | 6,000 | 3.00 | 6.00 |
| | | | 690,034 | 345 | 682,092 | 341 | 1,201 |
| | | | | | | | |
| | | | | | | | |
| | | **Total 2 Year Emissions (TPY)** | | | **686** | **TPY** | |
| | | **Yearly Average (TPY)** | | | **343** | **TPY** | |
| | | **Potential (TPY)** | | | **1,201** | **TPY** | |

# Table 5-2 BAE Supporting Basis

| Permit Condition | 2.3.j.i(A) | 2.3.j.i(B) | 2.3.j.ii(A)(1) | | 2.3.j.ii(A)(2) | 2.3.k | 2.3.j.ii(A)(2) | 2.3.l | | | | 2.3.m | | | | | | | | | 2.3.o |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calculation Method | 1 | 2 | 3 | | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 |
| MONTH | Solvent Recovery System Toluene Emissions (lbs/month) | Solvent Recovery System Non-Toluene VOC Emissions (lbs/month) | Other Coating Lines & Associated Tanks (Line 5 Specialty Chemicals) | Other Coating Lines & Associated Tanks (all except Line 5 Specialty Chemicals) | Pilot Coater and Calender (lbs/month) | Rubber Grinding and Pilot Extruder (lbs/month) | Coater #10 (lbs/month) | Generator Emissions (lbs/month) | Facility-wide NG Usage Emissions (lb/month) | Facility-wide Propane Usage Emissions (lb/month) | Facility-wide No 2 Fuel Oil Usage Emissions (lb/month) | No. 2 Storage Tank (ES-36-TK-PET) (lb/month) | R&D (lb/ month) | General Cleaning (lb/month) | Parts Washers (lb/month) | Liquid Material Storage Tanks (lbs/month) | Groundwater Remediation (lb/month) | Coater 10 Drum Unloading (lb/month) | Coater 10 Adhesive Mixing (lb/month) | R&D Spray Booth (lb/month) | Total VOC (lb/ month) |
| Jan-18 | 29,886.3 | 1,921.4 | 8,206.3 | 8,828.6 | 76.7 | 112.2 | 0.0 | 0.1 | 116.9 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 52,325 |
| Feb-18 | 46,549.9 | 2,269.1 | 4,346.2 | 6,802.3 | 130.0 | 143.0 | 0.0 | 0.0 | 99.9 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 63,518 |
| Mar-18 | 22,381.2 | 3,866.0 | 8,150.3 | 11,885.8 | 190.0 | 198.9 | 0.0 | 0.1 | 123.1 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 49,972 |
| Apr-18 | 31,604.7 | 3,418.4 | 4,333.4 | 9,908.2 | 92.0 | 157.8 | 0.0 | 0.1 | 99.1 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 52,791 |
| May-18 | 47,479.9 | 4,448.6 | 6,849.4 | 4,692.6 | 87.0 | 188.7 | 0.0 | 0.0 | 101.3 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 67,024 |
| Jun-18 | 51,843.2 | 5,516.2 | 7,497.2 | 6,916.7 | 113.6 | 254.4 | 0.0 | 0.1 | 100.0 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 75,418 |
| Jul-18 | 45,335.6 | 3,746.5 | 4,334.5 | 6,696.8 | 216.5 | 186.2 | 0.0 | 0.1 | 98.5 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 63,792 |
| Aug-18 | 37,891.1 | 4,278.9 | 4,978.4 | 7,009.6 | 153.0 | 171.3 | 0.0 | 0.0 | 98.7 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 57,758 |
| Sep-18 | 23,499.1 | 5,473.1 | 7,598.4 | 9,841.0 | 122.2 | 196.6 | 0.0 | 0.1 | 92.2 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 50,000 |
| Oct-18 | 38,475.2 | 4,502.0 | 5,374.7 | 6,505.9 | 164.0 | 169.5 | 0.0 | 0.1 | 112.2 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 58,481 |
| Nov-18 | 37,921.6 | 5,320.6 | 4,634.5 | 503.6 | 102.6 | 191.0 | 0.0 | 0.0 | 113.9 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 51,965 |
| Dec-18 | 20,978.3 | 1,528.3 | 5,024.9 | 16,068.2 | 44.9 | 87.9 | 0.0 | 0.1 | 80.7 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 46,990 |
| Jan-19 | 30,631.6 | 3,696.5 | 4,114.8 | 9,894.2 | 89.8 | 135.4 | 0.0 | 0.1 | 113.6 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 51,853 |
| Feb-19 | 28,241.1 | 4,855.9 | 5,285.0 | 11,972.2 | 97.5 | 174.1 | 0.0 | 0.1 | 104.5 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 53,907 |
| Mar-19 | 18,288.5 | 6,087.2 | 5,721.3 | 10,193.0 | 64.5 | 221.4 | 0.0 | 0.5 | 110.1 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 43,863 |
| Apr-19 | 35,415.9 | 3,780.6 | 4,124.2 | 9,548.9 | 21.5 | 147.4 | 0.0 | 0.4 | 102.0 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 0.0 | 0.0 | 500 | 56,318 |
| May-19 | 48,104.5 | 4,341.3 | 4,653.4 | 11,917.0 | 43.0 | 159.2 | 0.8 | 0.2 | 97.3 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 72,502 |
| Jun-19 | 23,791.5 | 5,125.8 | 6,197.3 | 13,285.1 | 14.5 | 199.6 | 0.0 | 0.0 | 91.3 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 51,890 |
| Jul-19 | 39,699.5 | 4,103.9 | 3,905.4 | 11,010.7 | 8.0 | 153.9 | 0.2 | 0.1 | 85.5 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 62,152 |
| Aug-19 | 66,446.1 | 4,466.4 | 4,028.3 | 10,623.0 | 1.5 | 147.7 | 0.5 | 0.1 | 101.6 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 89,000 |
| Sep-19 | 20,259.0 | 4,724.8 | 8,142.4 | 11,247.8 | 1.5 | 177.5 | 3.9 | 0.2 | 89.8 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 47,832 |
| Oct-19 | 40,076.6 | 4,130.2 | 4,751.2 | 7,414.6 | 5.0 | 159.2 | 0.0 | 0.4 | 92.6 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 59,815 |
| Nov-19 | 36,993.5 | 3,581.8 | 6,914.6 | 8,271.1 | 38.0 | 131.3 | 2.7 | 0.4 | 93.8 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 59,212 |
| Dec-19 | 16,835.8 | 3,745.0 | 3,316.4 | 6,406.2 | 42.0 | 130.0 | 0.1 | 0.5 | 86.1 | 0.00 | 0.00 | 1.00 | 500 | 1,000 | 500 | 500 | 176.0 | 4.0 | 4.0 | 500 | 33,747 |

## 5.2 Changes to Existing PAL Monitoring Requirements

Section 2.3.m. of the current permit includes the default emissions rates /emissions factors for several minor sources of emissions. The Permittee has requested revisions to the permit-included emissions rates for some of the sources as below:

- The permit includes an emission rate of 0.25 tons/month for R&D Spray Booth (ID No. ES-33-RDSB) to be used for PAL monitoring. The Permittee has stated that the actual coating usage for the R&D booth historically has been always lower than 0.25 tons / month. However, future business conditions could result in a need for greater utilization of this source. Therefore, the Permittee has requested this emission factor be increased to 0.5 tons/month. The DAQ approves this revised emission factor for the subject source.

- The permit includes an emission rate of 0.5 tons/month for General Plant Cleaning (ID No.ES-GPC) for PAL monitoring. The assumption of 0.5 tons / month (1000 lbs / month) was a conservative estimate of the non-toluene cleaning emissions at the time when the initial PAL was approved. General plant cleaning encompasses multiple small quantity usages of cleaning chemicals with the largest quantities being mineral spirits and citrus-type cleaners. However, the facility business has changed to where more non-toluene cleaners are utilized. The Permittee is proposing to change the emission factor or default emission rate to 1 ton/month. The DAQ approves this revised emission factor / default emission rate.

- The Permittee has stated that the actual coating usage for the R&D booth historically has been lower than permit-included default emission rate of 0.25 tons / month. However, future business conditions could result in the need for greater utilization of this source. Therefore, the Permittee has requested this emission factor be increased to 0.5 tons/month. The DAQ approves this revised emission factor. The DAQ also revises the source descriptor as requested to 'two R&D printers (ID Nos. ES-R&DPRN1 and ES-R&DPRN2) and miscellaneous R&D printer emissions".

- The permit includes an emission Rate of 0.0005 tons/month for Plant 36 Hydrocarbon Storage Tank (ID No. ES-36-TK-PET). This tank was previously utilized to store No. 2 fuel oil. But this fuel is no longer used for any facility equipment. It is currently not in use. The applicant requests that this factor be increased to 0.025 ton/month due to future use of the tank for storage of any petroleum hydrocarbons. The DAQ approves this revised emission factor / default emission rate.

- In addition, the Permittee has requested to revise the current stipulation in Section 2.3.j.ii.3. on requiring minor modifications as below:

    a. That subsequent minor modifications not involving emission controls be calculated using the method in section 2.3.j.ii.A.2.

    b. That subsequent minor modifications involving emission controls with an air emission destruction device such as an RTO be calculated according to the method in section 2.3.j.ii.A, similar to the methodology presented for the Hickory Plant Toluene-Based Coating Line 5 (Specialty Chemicals) source.

    c. That subsequent minor modifications involving a solvent-recovery system be calculated as described in Section 2.3.j.i.

  The DAQ disapproves this applicant request and determines that the requirement on submittal of minor modifications is not necessary. The basis for this determination is that the footnote to the Section 2.3.a. Table specifically allows that "the Permittee may make modifications or additions to the PAL emissions units in Section 2.3 a. above, without requiring a modification to the PAL provisions of this permit if the emissions from the modified or additional emissions units will be calculated according to the monitoring methods specified in Section 2.3.j.". It needs to be emphasized that the purpose of the PAL program is to allow the facility to manage facility-wide emissions without triggering NSR, respond rapidly to market changes, provide incentives to control emissions for creating maximum operational flexibility, all while reducing the administrative burden. Thus, the requirement for minor modifications as included in the current permit, whenever a new or existing source is

modified, does not serve the PAL purpose. As long as any new or modified emission unit's emissions are managed below the established PAL and the unit is to calculate its emissions using the permit-included monitoring method(s), then, there should be no need for any revisions to the PAL permit through minor modification procedure, until the PAL is required to be renewed or increased.

### 5.3 PAL Revalidation

In accordance with §51.166(w)(12)(ix), the PAL permit requires the Permittee to revalidate the emissions factors and any other data used in calculating VOCs emissions through performance test or other scientifically valid means once every five years. Refer the Section 2.3.e. of the current permit. The Permittee had submitted the last revalidation on June 22, 2016 with the supplemental information on September 20, 2017; thus, the next revalidation request is due from the applicant by June 22, 2021. The Permittee has used this PAL renewal application processing opportunity to also submit its revalidation request. Each of the items under the revalidation request is discussed below:

Solvent Recovery System (Section 2.3.j.i.(A))

As required, the Permittee uses a mass balance method to estimate VOCs emissions for the solvent recovery system (carbon adsorption system) when using solvent toluene, for the following emissions units: Hickory Plant Toluene-Based Coating Lines 5 and 8, Hickory Plant Raw Material Storage Tanks and Mixers, Bulk Resin System including Mixing Tank, Mixing Tanks, Carbon Adsorption Systems, Hickory Plant Raw Material Storage Tanks, Toluene Transfer Racks, Solvent-based Resin Transfer Racks, Fill Ports, and Mixing Area Parts Washers. The DAQ believes that the Permittee is using the most conservative method, for estimating emissions for these units. The mass balance approach specifically accounts for all losses by considering the toluene purchases and returns for the month, and toluene inventory at the beginning and end of the month. The DAQ believes that this method remains valid for estimating emissions for the above emissions units.

Solvent Recovery System (Section 2.3.j.i.(B))

For the emissions units, Hickory Plant Toluene-Based Coating Lines 5 and 8, Hickory Plant Raw Material Storage Tanks and Mixers, Bulk Resin System including Mixing Tank, Mixing Tanks, Carbon Adsorption Systems, Hickory Plant Raw Material Storage Tanks, Toluene Transfer Racks, Solvent-based Resin Transfer Racks, Fill Ports, and Mixing Area Parts Washers, when using other VOCs (other than toluene), Permittee uses the applicable Maximum Achievable Control Technology (MACT) JJJJ-based mass balance approach, for estimating the VOCs emissions by multiplying the total amount of each type of VOC containing material consumed during the month by the VOC content of each material. It is DAQ's understanding that the Permittee obtains the VOCs (along with HAP and solids) content from the Certified Product Data Sheet (CPDS) of the coating material supplier. Additionally, when the formulation for any VOC-containing compound changes, the Permittee obtains an updated CPDS. The DAQ believes that this permit-required mass balance approach remains valid and it estimates the worst-case emissions for the above emissions units when using VOCs other than toluene.

Other Coating Lines and Associated Tanks (Section 2.3.j.ii.(A)(1))

For the Hickory Plant Water-based Coating Lines, Hickory Plant Coating Lines 5 and 6 (Specialty Chemicals), Hickory Plant Raw Material Storage Tanks and Mixers (Specialty Chemicals), Hickory Plant Water-based Storage Tanks, Hickory Plant Other Storage Tanks, Highland Plant Coating Line, Highland Plant Water-based Storage Tanks, Highland Plant Other Storage Tanks, and Flexographic Printers, the Permittee is using the above referred MACT-based mass balance approach.

That is, the VOCs emissions are estimated by multiplying the total amount of each type of VOC containing material consumed during the month by the VOC content of each material. As stated above, the Permittee determines the VOCs (along with HAP and solids) content from vendor-supplied CPDS and when the formulation for any VOC-containing compound changes, it again determines the VOC content from the updated CPDS. The DAQ believes that this permit-required mass balance approach remains valid and that it estimates the worst-case emissions for the emissions units when using VOCs other than toluene.

As required, for Lines 5 and 6 "specialty chemicals", the Permittee applies a control efficiency of the associated regenerative thermal oxidizer (RTO) based upon the most recent performance test in NSPS Subpart RR, if all 3-hour periods of the month, during which the average temperature of the RTO is greater than or equal to the average temperature of the RTO observed during the performance test. Conversely, the Permittee applies a control efficiency of 0 percent for VOCs control for the RTO if any 3-hour period of the month during which the average temperature of the RTO is less than the average temperature of the RTO, observed during the most recent NSPS performance test.

Based on the application, the most recent performance test established a control efficiency of 92.7%, which is based upon the destruction efficiency of 97.6% and a capture efficiency of 95.0%. The Permittee has argued that the general type of VOCs exhausted to the RTO has not changed since the performance test. The operational temperatures for the RTO have likewise not changed. The RTO is designed for up to 40,000 CFM of air flow, and that air flow rate is not being exceeded. The applicant believes that the capture efficiency is greater than 95%. An inward face velocity of greater than 200 feet per minute has been demonstrated for each Natural Draft Opening. Smoke tests visually indicate 100% capture within the coating zone.

The DAQ believes that utilizing an RTO control efficiency for Lines 5 and 6 RTO that is based upon the most recent performance test in NSPS remains a valid method.

Similarly, for Highland Plant Coating Line, the Permittee is required to apply a control efficiency of 90 percent for RTO if all 3-hour periods of the month during which the average temperature of the RTO is greater than or equal to the average temperature of the RTO during the most recent performance test in the above referenced NSPS. Otherwise, the Permittee is required to apply a control efficiency of 0 percent for VOCs control for the RTO if any 3-hour period of the month during which the average temperature of the RTO is less than the average temperature of the RTO during the most recent performance test in the above referred NSPS. It should be noted that the Permittee does not apply the RTO control efficiency and instead uses 0% control for the Highland Plant RTO for emissions calculations all the time as a conservative estimate.

The DAQ believes that utilizing the RTO control efficiency for the Highland Plant Coating Line that is based upon the most recent performance test in NSPS remains a valid method.

Other Coating Lines and Associated Tanks (Section 2.3.j.ii.(A)(2))

With respect to Hickory Plant Pilot Coaters and Pilot Calendars, the Permittee is using a mass balance approach for estimating VOCs emissions. Specifically, VOCs emissions are determined by multiplying the total amount of each type of VOC containing material consumed during the month, by the VOC content of each material. As stated previously, the Permittee determines the VOCs (along with HAP and solids) content from vendor-supplied CPDS and when the formulation for any VOC-containing compound changes, it determines the VOC content from the updated CPDS. The DAQ believes that this permit-required mass balance approach remains valid and that it estimates VOCs emissions conservatively for the above emissions units.

Rubber Grinding and Conveying and Pilot-scale Extruder (Section 2.3.k.)

The permit includes an emission factor of 4.44 x $10^{-4}$ lb/lb rubber processed[2], which has not changed. Further this factor is the highest emission factor[3] from all rubber formulations, which provides a conservative approach for estimating emissions from these emissions units. The DAQ believes that the use of the above emission factor remains valid.

Boilers, Drying ovens, Emergency generators, and RTOs (Section 2.3.l.)

[2] Section 4.12 "Manufacture of Rubber Products", AP-42, 11/08, Available at DRAFT Final 4.12 Manufacture of Rubber Products - November 2008 (epa.gov).

[3] Compound 17, "Mixing - 30800111" in Emissions Factors Tables (Excel Spreadsheet), for Section 4.12, "Manufacture of Rubber Products", AP-42, 11/08, Available at DRAFT Final 4.12 Manufacture of Rubber Products - November 2008 (epa.gov).

The permit includes the following emissions factors for these emissions units:

5.5 lb/$10^6$ scf (boiler, drying oven, or RTO)
1.0 lb/$10^3$ gallon (boiler or drying oven)
0.00132 lb/hp-hr (natural gas/propane-fired emergency generator)

The use of the above emissions factors remain valid.

Other Sources (Section 2.3.m.)

The permit includes the following emissions factors/emissions rates for several negligible emissions units:

Emission Rate of 0.25 ton/month for Maintenance Area Parts Washers

The above emission factor represents a conservative assumption for the maintenance area parts washers and that it remains valid.

Emission Rate of 0.088 ton/month for Groundwater Remediation System

The Permittee has stated that testing of the groundwater remediation system exhaust indicated a worst-case emission rate of 841 lbs VOCs / year. This converts to 0.035 tons / month. By assuming 0.088 tons / month, allowance is made such that if emissions from the remediation system ever increased, the emission factor would not have to be adjusted. The groundwater contaminant concentration has decreased since the initial PAL for VOCs was issued. Therefore, the assumption continues to provide a conservative estimation of emissions. The DAQ agrees that the use of this default emission rate is appropriate and remains valid.

Emission Rate of 0.25 ton/month for R&D Spray Booth (ID No. ES-33-RDSB)

The Permittee has stated that the actual coating usage for the R&D booth historically has been lower than the 0.25 tons / month. However, future business conditions could result in the need for greater utilization of this source. Therefore, the Permittee has requested this emission factor be increased to 0.5 tons/month. The DAQ approves this revised emission factor / default emission rate and the method of emission estimation remains valid.

Emission Rate of 0.5 ton/month for General Plant Cleaning (ID No.ES-GPC)

The assumption of 0.5 tons / month (1000 lbs / month) was a conservative estimate of the non-toluene cleaning emissions at the time when the initial PAL was approved. General plant cleaning encompasses multiple small quantity usages of cleaning chemicals with the largest quantities being mineral spirits and citrus-type cleaners. However, the facility business has changed to where more non-toluene cleaners are utilized. The Permittee is proposing to change the emission factor or default emission rate to 1 ton/month. The DAQ approves this revised emission factor / default emission rate and the method of emission estimation remains valid.

Emission Rate of 0.25 ton/month for R&D Printers (ID No.ES-R&DPRN1 and ES-R&DPRN2)

The Permittee has deemed the permit-included emission factor / emission rate of 0.25 ton/month a conservative estimate for R&D printers. However, it has also forecasted that the above emission rate could be exceeded due to future business conditions. As a result, the Permittee has requested to revise the emission rate to 0.5 ton/month. The DAQ approves this revised emission factor / default emission rate and the method of emission estimation remains valid.

Emission Rate of 0.0005 ton/month for Plant 36 Hydrocarbon Storage Tank (ID No. ES-36-TK-PET)

This tank was previously utilized to store No. 2 fuel oil. But this fuel is no longer used for any facility equipment. It currently is not in use. The applicant requests that this factor be increased to 0.025 ton/month due for future use of

the tank for other petroleum hydrocarbons. The DAQ approves this revised emission factor / default emission rate and the method of emission estimation remains valid.

Emission Rate of 0.25 ton/month for Mixed Solvent Raw Material Storage Tanks (ID Nos. ES-33ST-1)
Emission Rate of 2.0E-04 ton/month per Drum Unloading Station (ID Nos. IES-33-DRUMUNLOAD)
Emission Rate of 5.0E-04 ton/month per Adhesive Mixing Tank (ID Nos. IES-33-ADMIX)

For the above default emissions factors/rates, the Permittee stated that the emissions rates were developed using the worst-case displacement and number of potential tank fills per month. The DAQ agrees that the use of these default emission rates is appropriate and they remain valid.

### 5.4 Typographical Errors to Existing PAL Requirements and Permit Stipulations

- Remove the reference to Coating Line 6 as solvent-coating line in Sections 2.3.a, 2.3.j.i.(A) and (B), and Section 2.3.j.ii. The Permittee has argued that this coating line was permitted to handle "specialty coatings" in addition to water-based coatings. However, that capability was never utilized, and Coater 6 was never vented to the RTO. Coater 6 operates only with water-based coatings and is vented to atmosphere. The ability for that line to operate using solvent-based coatings has been removed from the permit. However, some of the references to Coating Line 6 being used with solvent were accidentally missed [by the DAQ] when the permit was prepared. Thus, the DAQ approves this request and will make the changes to the coating line 6 reference in the above Sections.

- Revise the source descriptors for "Mixed Solvent Raw Material Storage Tanks" to "Liquid Material Storage Tanks" and "Highland Plant Water-based Storage Tanks" to "Highland Plant Storage Tanks" throughout the permit. The applicant argues that this request was made before the DAQ issued the current permit 02218T36, but was not take care of. The DAQ approves this request and will make revisions to the source descriptors as above.

- The applicant states that when the air permit 02218T36 was issued, the DAQ missed making one change that was requested at the time to the Section 2.3.j.ii.(A) stipulation. Specifically, the permit included the language to allow the set point of the RTO during the most recent performance test as the compliance temperature for the RTO, recognizing that unlike many RTO applications, the solvent load to the Line 5 RTO is such that the temperature in the oxidizer increases when production is occurring. As such, controlling the average temperature of the RTO is not possible and the key control requirement is that the temperature be greater than or equal to the minimum temperature set point of the RTO during the performance test. This language was included in the permit in this Section, however there was one line which inadvertently contained the previous language. The Permittee has requested that this stipulation be modified as follows:

  "The Permittee shall apply a control efficiency of RTO based upon the most recent performance test in Section 2.2 D.1.i. above for VOC emissions from Hickory Plant Coating Lines 5 (specialty chemicals) if all 3-hour periods of the month during which the average temperature of the RTO is greater or equal to the minimum temperature set point of the RTO during the above performance test. The Permittee shall apply a control efficiency of 0 percent for VOC for the RTO for any 3-hour period of the month during which the average temperature of the RTO is less than the minimum temperature set point of the RTO, during the most recent performance test in Section 2.2 D. 1 .i . above."

  The DAQ approves this request for Coating Line 5 RTO. It should be noted that the above similar change will also be made to the Plant 36 RTO stipulation in the same Section 2.3.j.ii.(A).

- The applicant states that emission sources IES-WEBTREAT are corona treaters that emit ozone only and do not emit VOCs or any regulated air pollutant under Title V program. Thus, it requests to remove these from Section 2.3. VOCs PAL. The DAQ approves this request.

- Add emissions sources, Bulk Flake Resin Melter (IES-36-BM1) and Resin Pre-Melter (IES-36-BM2), to the Section 2.3.ii.(A) of the permit. The DAQ approves this request.

- Revise the source descriptor for the Plant 36 boiler from "ES-36-BLR-B1" to "ES-BLR-B1". The DAQ approves this request.

- Replace the reference for "mixed solvent raw material storage tanks" with "liquid material storage tanks". The DAQ approves this request.

- In Section 2.3.o., correct the reference for Section 2.4 to Section 2.3. The DAQ will make this correction.

- Include the replacement pilot coater 2 in the insignificant activity list as per the applicant's applicability determination request of April 7, 2021 (DAQ Tracking Number 3642).

  Regarding this separately submitted applicability determination for the replacement R&D Pilot Coater No. 2 for the Hickory facility, the DAQ agrees with the applicant that its PTE for VOCs ("regulated air pollutant" for Title V program) is less than the 5 tons/yr threshold and the HAP emissions are not expected from it; thus, the agency deems it an insignificant source per 15A NCAC 02Q .0503(8) and will list it accordingly when the PAL permit renewal for the facility is drafted. The replacement coater will be subject to the NSPS RR and VOCs PAL requirements (just like the R&D Pilot Coater 2 to be replaced and as permitted) among other requirements as included in the current permit 02218T36. In summary, the agency approves the applicant's request for the replacement pilot coater to be included in the insignificant activity list.

**5.5 Revisions to NESHAP Requirements**

- The EPA has revised the NESHAP Subpart JJJJ "National Emission Standards for Hazardous Air Pollutants Paper and Other Web Coating" through its Residual Risk and Technology review on July 9, 2020 (85 FR 41276). Pursuant to this revision, the applicant has requested the following changes to Section 2.2.B.1. of the permit. The DAQ approves these changes pursuant to this NESHAP amendment:

  - In Section 2.2.B.1.e, include periodic testing for destruction and removal efficiency for each thermal oxidizer in Section 2.2.B.1.e.
  - Revise Section 2.2.B.1.f..i.(B) to require maintenance of the combustion temperature no more than 50 $^{O}$F lower than the average combustion temperature observed during performance test.
  - Revise the Section 2.2.B.1.l.i. to include the requirement to install, calibrate, maintain, and operate the temperature monitoring equipment according to the manufacturer's specifications.
  - In Section 2.2.B.1.l.iii, include the quality control program for temperature monitoring equipment.
  - Insert a new Section 2.2.B.1.l.iv for validation checks requirement for temperature monitoring equipment.
  - Insert a new Section 2.2.B.1.l.v. for quarterly monitoring for temperature sensor components for proper connection and integrity.

  - Revise the equation numbers as below:

    Equation 7 to Equation 11
    Equation 8 to Equation 12
    Equation 14 to Equation 19
    Equation 6 to Equation 10
    Equation 9 to Equation 13

  - Revise references for §63.3370 starting with (e). For example §63.3370(e) should be 63.3370(f), §63.3370(f) becomes §63.3370(g), and so on.

- The EPA has revised the NESHAP Subpart EEEE "National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)" through its Residual Risk and Technology review on July 7, 2020 (85 FR 40740). Pursuant to this revision, the applicant has requested the following change to Section 2.2.C.1. of the permit. The DAQ approves the change pursuant to this NESHAP amendment:

- Make the storage tanks (capacity 5,000 gallons or more) subject to control requirements under this NESHAP for existing, new, and reconstructed sources, based on the compliance dates specified in §63.2342(e).

**6. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM**

NSPS

The applicable NSPSs for the facility sources have been listed in in Section 5.1 above. This PAL renewal request does not change the status of facility sources with respect to NSPS.

NESHAP/MACT

The applicable NESHAPSs or MACTs for the facility sources have been listed in Section 5.1 above. The PAL renewal request does not change the status of facility sources with respect to NESHAP or MACT. But, the Section 5.5 above includes the discussions on revisions to the existing NESHAPSs for affected sources.

PSD

The facility is a major stationary source for PSD and it has obtained PAL permits for both VOCs and greenhouse gases (GHGs). PAL renewal does not trigger the major source (or major modification) requirements in PSD.

Attainment Status

Catawba County is currently in attainment or unclassifiable/attainment for all NAAQSs.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act.

CAM

Not applicable. The applicability to CAM is generally required to be addressed during the renewal or significant modification applications. This application is not a renewal of the Title V permit. It is a significant modification application solely to process the renewal of the existing VOCs PAL. Thus, CAM applicability does not need to be addressed here with this permit revision.

**7. Facility Wide Air Toxics**

The facility is currently not subject to NC's air toxics program requirements in 02Q .0700 and 02D .1100. As per the application review supporting the current permit 02218T36 (January 11, 2019), "the air toxics limits were removed from the permit under Air Permit No. 02218T32 issued on December 12, 2012" because it was "determined [that] the facility did not present an unacceptable risk to human health".

**8. Facility Emissions Review**

Page 1 of this application review above includes actual emission for 2015 through 2019.

**9. Public Notice/EPA and Affected State(s) Review**

With respect to the Title V procedures for public participation, pursuant to 15A NCAC 02Q .0521, a notice of the DRAFT Title V Permit will be placed on the NCDEQ website on xx with a comment period beginning on xx. The notice will provide for a 30-day comment period with an opportunity for a public hearing. Copies of the public notice will be sent to the persons on the Title V mailing list and EPA on xx. Pursuant to 15A NCAC 02Q .0522, a copy of the permit application and the proposed permit (in this case, the draft permit) will be provided to EPA for their 45-day review on xx. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit will be provided to each

affected State at or before the time notice provided to the public under 02Q .0521 above. A copy of the final permit will also be provided to the EPA upon issuance as per 02Q .0522.

Finally, it should be noted here that the above Title V procedure for public participation in 02Q .0521 conforms to the public participation requirement for PAL renewals in §5.166(w)(5) (i.e., 30-days period for submittal for public comments). Additionally, pursuant to this PAL provision and the significant modification procedure in §70.7(h)(6), the DAQ will respond in writing all public comments, whether received during the public comment period or raised during public hearing (if any) before taking a final action on the submitted PAL renewal application.

**10. Stipulation Review**

The following Table 10-1 lists the changes to the Shurtape Technologies LLC – Hickory/Highland Plant's Air Quality Permit No. 02218T36:

**Table 10-1 Summary of Changes to Current Permit**

| **Old Page** Air Quality Permit No. 02218T36 | **Old Section** Air Quality Permit No. 02218T36 | **New Page** Air Quality Permit No. 02218T37 | **New Section** Air Quality Permit No. 02218T37 | **Description of Change(s)** |
|---|---|---|---|---|
| Cover letter & first page of permit | | | | Amended permit numbers and dates. Removed Mr. Paul Scott as an RO. Amended the increment tracking statement in the cover letter. |
| - | - | - | - | Revised the insignificant activity list (attachment to cover letter) to add replacement pilot coater No. 2 with ID IES-33-PC-2. |
| 3 | Section 1 Table | 3 | Section 1 Table | Replaced the descriptor "mixed solvent raw material storage tanks" with "liquid material storage tanks". Removed the NSPS KK applicability for line 5 flexographic printer (ES-33-5-FP) and coating line (ES-36-CL-1). Removed the replaced pilot coater No. 2. Revised the Plant 36 boiler ID "ES-36-BLR-B1" to read "ES-BLR-B1". |
| 10 | Section 2.1.A.2.d. | 10 | Section 2.1.A.2.d. | Clarified the 02D .0521 requirement regarding the consequence for observation of above normal emissions or lack of Method 9 demonstration. |
| 11 | Section 2.1.B. | 11 | Section 2.1.B. | Replaced the descriptor "mixed solvent raw material storage tanks" with "liquid material storage tanks". |
| 12 | Section 2.1.C. | 12 | Section 2.1.C. | Removed the pilot coater No. 2. |
| 12 | Section 2.1.C. Table | 12 | Section 2.1.C. Table | Removed the NSPS KK applicability for line 5 flexographic printer (ES-33-5-FP) and coating line (ES-36-CL-1). |
| 14 | Section 2.1.C.4. | - | - | Removed the NSPS KK requirements for line 5 flexographic printer (ES-33-5-FP) and coating line (ES-36-CL-1). |
| 15 through 22 | Section 2.1.E. | 14 through 19 | Section 2.1.E. | Revised the Plant 36 boiler ID "ES-36-BLR-B1" to read "ES-BLR-B1". |
| 15 | Section 2.1.E. Table | - | - | Removed the applicability of CAA §112(j) requirement. |
| 17 | Section 2.1.E.5. | - | - | Removed the non-applicable CAA §112(j) requirement |

| **Old Page** Air Quality Permit No. 02218T36 | **Old Section** Air Quality Permit No. 02218T36 | **New Page** Air Quality Permit No. 02218T37 | **New Section** Air Quality Permit No. 02218T37 | **Description of Change(s)** |
|---|---|---|---|---|
| 22 through 30 | Section 2.2.B.1. | 21 through 30 | Section 2.2.B.1. | Revised the NESHAP requirements in Section 2.2.B.1. per amendment issued on July 9, 2021 (85 FR 41276) as follows:<br><br>Revised Sections 2.2.B.1.a, b., c., e., f., l., o. q. and r.<br><br>Removed the Section number 2.2.B.1.t. for the non-compliance statement as it is specifically included for Section 2.2.B.1.s. and it does not by itself needs to have a specific section number.<br><br>Replaced Sections 2.2.B.1.u. with Sections 2.2.B.1.t. through w.<br><br>Replaced Sections 2.2.B.1.v. through y. with Sections 2.2.B.1.x. through ee. |
| 30 through 32 | Section 2.2.C.1. | 31 through 32 | Section 2.2.C.1. | Revised the NESHAP requirements per amendment issued on July 7, 2020 (85 FR 40740) as follows:<br><br>Revised Section 2.2.C.1.e. |
| - | - | 34 | Section 2.2.D.1.m. | Included a non-compliance statement. |
| 37 | Section 2.3.a. | 37 | Section 2.3.a. | Removed coating line 6 from the solvent-based coating lines listing for affected units.<br><br>Inserted prefix "I" for pilot coater No. 2 ID (ES-33-PC-2).<br><br>Revised the descriptor for "Highland Plant Water-based Storage Tanks" to "Highland Plant Storage Tanks".<br><br>Revised the Plant 36 boiler ID "ES-36-BLR-B1" to read "ES-BLR-B1".<br><br>Included emission unit IS-PD1-EX1 under "rubber grinding and conveying operations".<br><br>Included source descriptors for emissions units: Spray Booth (ID No. ES-33-RDSB), General Plant Cleaning (ID No. ES-GPC), R&D Printers and Miscellaneous R&D Emissions (ID Nos. ES-R&DPRN1 and ES-R&DPRN2), and Petroleum Hydrocarbon Storage Tank (ID No. ES-36-TK-PET).<br><br>Removed corona treater (IES-33-WEBTREAT) as it is not subject to VOCs PAL requirement. This source does not emit VOCs. |
| 40 | Section 2.3.j.i.(A) Section | 40 | Section 2.3.j.i. Section 2.3.j.ii.(A)(1) | Replaced the descriptor "mixed solvent raw material storage tanks" with "liquid material storage tanks". |

| **Old Page** Air Quality Permit No. 02218T36 | **Old Section** Air Quality Permit No. 02218T36 | **New Page** Air Quality Permit No. 02218T37 | **New Section** Air Quality Permit No. 02218T37 | **Description of Change(s)** |
|---|---|---|---|---|
| | 2.3.j.ii.(A) | | | |
| 40 | Section 2.3.j.i. | 40 | Section 2.3.j.i. | Removed coating line 6 from description for solvent based coating lines. |
| 40 | Section 2.3.j.ii.(A) | 40 | Section 2.3.j.ii.(A) | Removed coating line 6 from description for coating lines dedicated for processing specialty chemicals. Revise the descriptor for "Highland Plant Water-based Storage Tanks" to "Highland Plant Storage Tanks". |
| 40 | Section 2.3.j.ii.(A)(1) | 40 | Section 2.3.j.ii.(A)(1) | Corrected and replaced the word "average" with "minimum" in the last sentence in the last paragraph of this stipulation. |
| 41 | Section 2.3.j.ii.(A)(3) | - | - | Removed this requirement. The footnote to Section 2.3.a clearly indicates that the permittee can make modifications and additions to the emission units included in the Table without modifying the PAL portion of the Title V permit as long as the monitoring for the modified or new unit will be according to the method(s) already included in the permit. Requiring minor modifications to revise the PAL permit is inappropriate and incorrect. |
| 41 | Section 2.3.m. | 41 | Section 2.3.m. | Included source descriptors for emissions units: Spray Booth (ID No. ES-33-RDSB), General Plant Cleaning (ID No. ES-GPC), R&D Printers and Miscellaneous R&D Emissions (ID Nos. ES-R&DPRN1 and ES-R&DPRN2), and Petroleum Hydrocarbon Storage Tank (ID No. ES-36-TK-PET). |
| 47 through 56 | Section 3 | 47 through 58 | Section 3 | Included the latest General Conditions from DAQ's Title V Shell. |

**11. Conclusions, Comments, and Recommendations**

- The application does not involve any air pollution control device on a new or modified source at the facility, requiring review of a design or determination of its performance by a professional engineer licensed in NC. Thus, the requirement in 02Q .0112 "Applications Requiring Professional Engineer Seal" does not apply.

- The submitted PAL renewal application does not entail expansion of the existing facility; thus, the zoning consistency requirement in 02Q .0507(d)(1) does not apply.

- The draft permit was emailed to the Permittee for review on April 29, 2021. The Permittee (Jerry Eplin) emailed on May 14, 2021 the comments on the draft permit which are discussed below:

  Comment 1:

  "In your "Summary of Changes to the Permit", you indicate that Paul Buckland was removed as RO. It was "Paul Scott" that was removed as the RO. Andy Buckland is still the RO."

  Response:

  Agreed. There is a mistake, regarding Paul Scott's last name. It will be corrected.

Comment 2:

"Permit page 8: We do not believe that comment "b" is needed. That comment was added to the permit when ES-33-RS was first permitted. ES-33-RS is already installed, operational, and already connected to the referenced control devices."

Response:

The footnote "b" to the Section I Table will be removed as per the applicant's request.

Comment 3:

"Permit page 10, Section 2.1.A.1 and 2: Shurtape would like to inquire as to whether or not the Monitoring, Recordkeeping, and Reporting portion could be changed to "No monitoring, recordkeeping, or reporting is required for these sources." Shurtape has been completing the referenced activities for numerous years and has never had a documented instance of excess particulate or visible emissions from these sources."

Response:

This comment will not be processed at this time. Instead after discussions with the applicant, the DAQ asked the applicant that during the processing of the next renewal application, he/she should provide data on particulate and visible emissions from the associated rubber grinding and conveying system, documenting its requests on removal of all monitoring, record keeping, and reporting requirements in Sections 2.1.A.1. and 2.

Comment 4:

"Permit page 15 – table: Shurtape believes that ES-33-BLR-B3 should be included in the Sulfur Dioxide and Visible Emissions sections of the table."

Response:

Agreed. This change will be made.

Comment 5:

"Permit page 16, Section 5.a.i: Shurtape believes that this paragraph is no longer needed as it is in reference to the 112j case-by-case MACT."

Response:

Disagreed. The date of May 20, 2019 in Section 2.1.A.5.a.i. refers to the applicability date for the NESHAP Subpart DDDDD requirements and it is not a reference to the previously applicable requirement under 02D .1109 (CAA §112(j)). The requirements of 02D .1109 have been removed with the processing of this application. No change to this permit stipulation will be made.

Comment 6:

"Permit page 23, Section f – RTO Average Combustion Chamber Temperature: It is important to note that many coatings will result in an increase in the combustion chamber temperature above the set point due to the VOC "fuel value" loading."

"Temperature in the RTO above the set point is coating dependent. For example. IF the Stack test were run with the highest VOC loading possible, the RTO temperature may run 50-150 degrees above the set point. Conversely, a very low VOC content coating may run right at the set point. Thus, the term average combustion chamber temperature, while used in the MACT, is not appropriate for RTOs that see a variety of VOC loading. The Set

point temperature is the most appropriate term to use and is established during the stack test. For example, during a stack test, the set point may be 1500F. That is recorded as prescribed in (f)(i)(a). When the RTO enters the self-sustaining condition (i.e., little or no fuel is being added), the temperature will rise across the combustion chamber to a value greater than the set point. However, that value is dependent upon the VOC content of the coating. IF the business dictates low VOC content coatings for a period of time, the RTO may not achieve the temperature achieved by the Higher VOC content material requiring significant additional Fuel consumption corresponding in higher GHG emissions. IF the "set point temperature" is used, and demonstrated to be compliant during the stack test. This temperature should be the established temperature set point for the RTO. DAQ has already recognized this in the NSPS Subpart RR compliance language of the permit and in Section 2.3 of the PAL Permit. We would welcome an opportunity to discuss this with you and the DAQ Technical Services Team."

Response:

The Permitting Section has referred this comment to the Technical Services Section (TSS) for resolution. The comment will not be resolved at this time and no change to the referenced permit stipulation will be made. The TSS will decide on what assistance the DAQ can provide to the applicant regarding the issue discussed in the above comment.

Comment 7:

"Permit page 24, Section l.iii: Shurtape requests clarification that "paragraph (e)(10(iv)(A), (B), (C), (D), (E), and (F) of this section" refers to "40 CFR 63.3350 paragraph (e)(10(iv)(A), (B), (C), (D), (E), and (F)."

Response:

The DAQ will include the reference to 40 CFR 63.3350 as per the applicant's request.

Comment 8:

"Permit page 29, Section v: Shurtape request clarification as to when this section would apply, i.e. to what the term "operating limits" is referring. Would it be appropriate to use the term emissions limitations rather than operating limits to provide greater clarity as to when this provision applies?"

Response:

The requirement in §63.3410(c) as included in Section 2.2.B.1.v. of the permit states "each deviation from an operating limit occurring at an affected source"; thus, the included permit language is accurate and DAQ will not make any change or clarification to the stipulation.

Comment 9:

"Permit page 30, Section cc and dd: Shurtape does not believe that these sections are applicable to the facility. Paragraph cc is referring to Continuous Monitoring Systems, and paragraph dd is referring to Startup, Shutdown, and Malfunctions."

Response:

Agreed.

The CMS (continuous monitoring system) evaluation for temperature sensor (RTO) is not required; so, the electronic reporting under §63.3400(g) does not apply. The DAQ will remove the requirements in Section 2.2.B.1.cc.

The SSM (start-up, shutdown, and malfunction) reporting requirements for the existing units under NESHAP JJJJ (§63.3400(k)) shall apply until July 8, 2021 and not thereafter. Thus, since the permit revision is not expected to

be finalized before the above date, the DAQ will remove the SSM reporting requirement as included in Section 2.2.B.1.dd.

Comment 10:

"Permit page 32, Section iv.ii: Shurtape believes the correct reference to be "Items 3 through 6", not "Items 1 through 3".

Response:

Agreed. This mistake will be corrected.

Comment 11:

"Page 38, table: Source "ES-F-PW1R&D" is referenced. The correct reference is "ES-F-PW1"."

Response:

This change will be made to the source ID.

Comment 12:

"Page 40, Section i(A): Currently the VOC emission calculation in this section references "Purchases and Return". Shurtape would like to modify this wording to reference "Toluene added to inventory, and toluene removed from inventory". Generally, "purchases" represents toluene added to inventory, and "returns" indicate toluene removed from inventory. However, there are instances where significant quantities of toluene could be added to or removed from inventory without representing a purchase or a return. For example, in the event that a tank needed to be taken out of service for any reason, there could be up to 10,000 gallons of material that gets temporarily stored offsite in tanker trucks, and then gets added back into inventory when the tank goes back into service. Likewise, if the toluene were unusable for any reason, there could be significant quantities that were disposed of as wastes and thus are removed from inventory but not "returned". We believe that "Toluene added to inventory and toluene removed from inventory" provides more clear definition of these parameters."

Response:

The DAQ will restate in Section 2.3.j.i.(A) the references for "Purchases and Return" to "Toluene added to inventory and toluene removed from inventory."

Comment 13:

"Page 42 – Section m: In reviewing the draft permit Shurtape identified an opportunity to provide an alternative VOC calculation method that could be independent of the prescribed methods of 2.3(j) &(m). IF there were ever an occurrence whereby the prescribed MACT requirements could not be fulfilled, an alternative method should be specified that would be applicable to VOC Sources such as coating lines, printers, tanks, parts washers, etc. that provides for VOCs to be calculated as follows:

| | | | | | |
|---|---|---|---|---|---|
| Material Usage | x | Material x VOC Content | (1-Capture and Control Eff) | = | VOC (TPY) |

Proposed: New 2.3(n)
IF the permittee is not able to utilize the prescribed methods in 2.3(j) or (m) for determining VOC emissions for the sources utilizing the prescribed mass balance or if source's emissions can be estimated via mass-balance, the permittee may use the following alternative emission calculation method

| | | | | | |
|---|---|---|---|---|---|
| Material Usage | x | Material x VOC Content | (1-Capture and Control Eff) | = | VOC (TPY) |

In using this alternative method, the permittee shall report the use of this method in the semi-annual report for the period in which this method was relied upon."

Response:

The Permittee performs mass balance calculations under VOC PAL, especially in Section 2.3.j.ii.(A), using the MACT JJJJ methodology. The Permittee uses default emissions rates for miscellaneous sources in Section 2.3.m. for VOC PAL compliance. The Permittee wishes to include in the permit an alternative approach if he/she is unable to use the MACT prescribed method to perform mass balance or cannot use the default emissions rates under the VOC PAL. The DAQ believes that the applicant proposed alternative is reasonable for sources included in Section 2.3.j.(i)(A) and m., using mass balance and RTO's capture and control efficiencies.

Comment 14:

"Page 54, Section EE: Shurtape request that NC DEQ DAQ consider modifying the language in this section to state, …"stores any amount of a 112r Hazardous Substance…" to clarify what the term "hazardous substance" means – there are other regulations that also use the term "hazardous substance" and the lists are not the same."

Response:

The DAQ will take the applicant comment under advisement and consider it next time the DAQ's TV permit shell is revised. No change to the permit stipulation can be made at this time.

- The draft permit was emailed to the Mooresville Regional Office (MRO) for review and comment on April 29, 2021. Denise Hayes (MRO) provided comments via email on May 3, 2021. Each of her comments and responses are included below:

  Comment 1:

  Check the page number references for each source in Section 1 Table.

  Response:

  The DAQ will review the page number references in Section 1 Table for each source and revise, if appropriate.

  Comment 2:

  Include the reference for boiler ES-33BLR-B3 in Section 2.1.E. Table. Replace "." with "," in the same table when describing sources subject to any emission standard/limit.

  Response:

  Agreed. These changes will be made in Section 2.1.E. Table.

  Comment 3:

  MRO questions whether the inclusion of semi-annual reporting for fuel usage activities for each affected boiler in Section 2.1.E.4.c.iii. is pursuant to the requirement in 02Q .0508(f).

  Response:

  The reporting requirement in Section 2.1.E.4.c.iii. is pursuant to 02Q .0508(f) and not due to the applicable NSPS Subpart Dc. This Subpart does not require reporting of fuel usage records for natural gas/propane fired boilers.

  Comment 4:

Include the associated RTO CD-33-56 in Section 2.1.F. (Source Description).

Response:

Agreed. This change will be made.

- The review engineer recommends issuing the revised Title V permit with the PAL renewed after the completion of both the public review (30-days) and EPA review (45-days) periods.